$$\begin{pmatrix} y1 \\ y2 \\ y3 \\ y4 \\ y5 \\ y6 \\ y7 \\ y8 \end{pmatrix} = \frac{1}{16} \begin{pmatrix} 6 & 4 & 2 & 2 & 1 & 1 & 0 & 0 & 0 & 0 \\ 4 & 2 & 4 & 2 & 2 & 1 & 1 & 0 & 0 & 0 \\ 2 & 2 & 2 & 4 & 2 & 2 & 1 & 1 & 0 & 0 \\ 1 & 1 & 2 & 2 & 4 & 2 & 2 & 1 & 1 & 0 \\ 0 & 1 & 1 & 2 & 2 & 4 & 2 & 2 & 1 & 1 \\ 0 & 0 & 1 & 1 & 2 & 2 & 4 & 2 & 2 & 2 \\ 0 & 0 & 0 & 1 & 1 & 2 & 2 & 4 & 2 & 4 \\ 0 & 0 & 0 & 0 & 1 & 1 & 2 & 2 & 4 & 6 \end{pmatrix} \begin{pmatrix} x0 \\ x1 \\ x2 \\ x3 \\ x4 \\ x5 \\ x6 \\ x7 \\ x8 \\ x9 \end{pmatrix}$$

FIG. 1

(PRIOR ART)

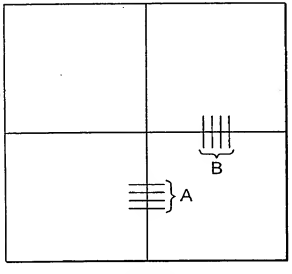
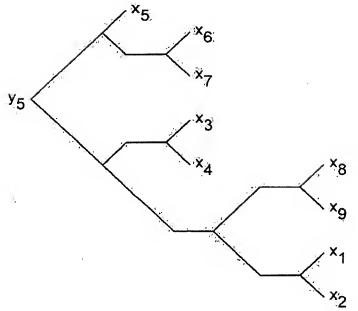
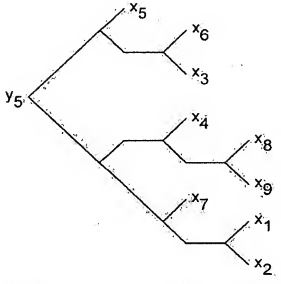


FIG. 2



$$y_5 = \frac{1}{2}\left(\frac{1}{2}\left[x_5 + \frac{(x_6 + x_7)}{2}\right] + \frac{1}{2}\left(\frac{(x_3 + x_4)}{2} + \frac{1}{2}\left[\frac{(x_8 + x_9)}{2} + \frac{(x_1 + x_2)}{2}\right]\right)\right)$$

FIG. 3A

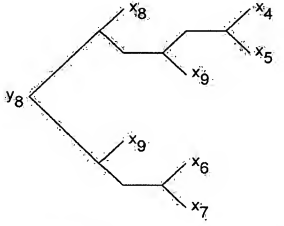


$$y_5 = \frac{1}{2}\left(\frac{1}{2}\left[x_5 + \frac{(x_6 + x_3)}{2}\right] + \frac{1}{2}\left(\frac{1}{2}\left[x_4 + \frac{(x_8 + x_9)}{2}\right] + \frac{1}{2}\left[x_7 + \frac{(x_1 + x_2)}{2}\right]\right)\right)$$

FIG. 3B

$$y_8 = \frac{1}{16}\left(x_4 + x_5 + 2x_6 + 2x_7 + 4x_8 + 6x_9\right)$$

$$= \frac{1}{16}\left(x_4 + x_5 + 2x_6 + 2x_7 + 4x_8 + 4x_9 + 2x_9\right)$$



$$y_8 = \frac{1}{2}\left(\frac{1}{2}\left[x_9 + \frac{(x_6 + x_7)}{2}\right] + \frac{1}{2}\left(x_8 + \frac{1}{2}\left[x_9 + \frac{(x_4 + x_5)}{2}\right]\right)\right)$$

FIG. 4